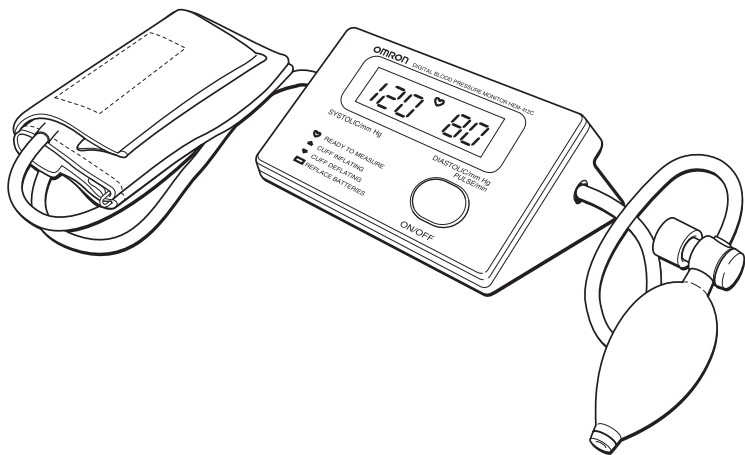


OMRON®

# INSTRUCTION MANUAL

## MANUAL INFLATION BLOOD PRESSURE MONITOR

Model **HEM-412C**



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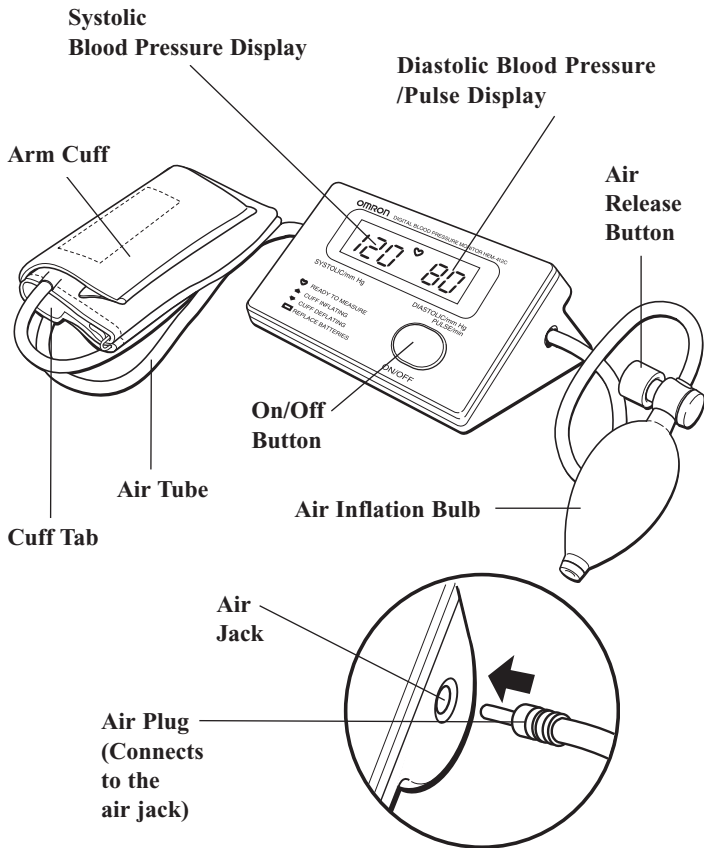
# INTRODUCTION

Thank you for purchasing the Omron HEM-412C Manual Inflation Blood Pressure Monitor. This easy-to-use monitor quickly detects your blood pressure and pulse measurements and displays them on a large, clear digital panel.

Your new HEM-412C uses the oscillometric method of blood pressure measurement. This means the monitor detects your blood's movement through your brachial artery and converts the movements into a digital reading. An oscillometric monitor does not need a stethoscope so the monitor is simple to use. The monitor features an easy-to-squeeze inflation bulb that allows you to quickly fill the cuff with air. Stop pumping and the cuff deflates automatically. Error indicators alert you to incorrect procedures and an automatic power-off function conserves batteries.

**Please read this instruction manual thoroughly before using the Omron HEM-412C Manual Inflation Blood Pressure Monitor. For specific information on your own blood pressure, CONTACT YOUR PHYSICIAN.**

# KNOW YOUR UNIT

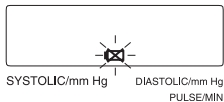
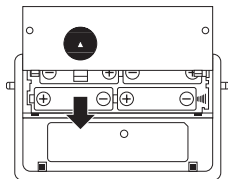
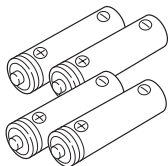
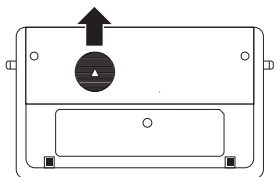


## QUICK REFERENCE GUIDE

1. Avoid eating, smoking, and exercising for at least 30 minutes before taking a measurement.
2. Put your left arm through the cuff loop. The bottom of the cuff should be about 1/2" above the elbow. The cuff tab should lie over the brachial artery on the inside of the arm.
3. Pull the cuff so that it is tightened evenly around your arm. Press the sewn hook material firmly against the pile side of the cuff. Make sure that your skin will not be pinched in the D-ring once you inflate the cuff. Immediately deflate the cuff and readjust it if skin becomes pinched.
4. Sit in a chair with your feet flat on the floor and place your left arm on a table so that the cuff is at the same level as your heart.
5. After the Ready To Measure Symbol (♥) appears next to a zero on the digital panel, quickly squeeze the inflation bulb to inflate the cuff. Stop pumping when the numbers on the display are approximately 40 mmHg higher than your normal systolic blood pressure.
7. The cuff will deflate automatically. Remain still throughout the entire reading.
8. When measurement is complete, the monitor alternately displays your blood pressure and pulse on the digital panel.
9. Wait 5-10 minutes before taking another blood pressure measurement. You may need more rest time between readings depending on your individual physical characteristics.

# BATTERY INSTALLATION/REPLACEMENT

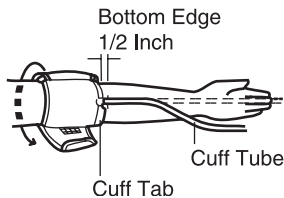
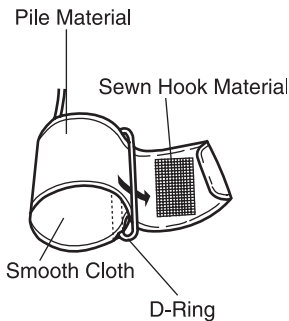
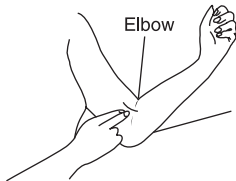
1. Slide the battery cover off in the direction of the arrow.
2. Install 4 “AA” size batteries so + (positive) and – (negative) polarities match the polarities of the battery compartment as indicated.
3. Replace the battery cover.
4. If the Low Battery Indicator appears on the display, replace all four batteries. Long-life alkaline batteries are recommended.
5. Remove the batteries if the monitor will not be used for an extended period of time.



## Low Battery Indication

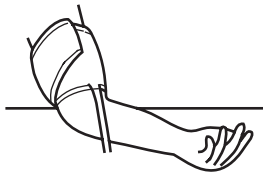
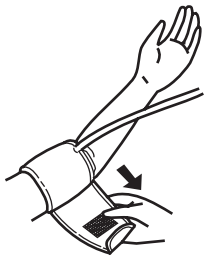
# HOW TO APPLY THE ARM CUFF

1. Locate your brachial artery by pressing two fingers approximately one inch above the elbow crease on the inside of the left arm. Determine where your pulse is strongest.
2. The cuff should be assembled correctly when it is removed from the box. If it is not, pass the end of the cuff furthest from the tubing through the metal D-ring to form a loop. The smooth cloth should be on the inside of the cuff loop.
3. If the cuff is assembled correctly, the sewn hook material will be on the outside of the cuff loop and the metal D-ring will not touch your skin.
4. Put your left arm through the cuff loop. The bottom of the cuff should be approximately 1/2 inch above the elbow. The cuff tab should lie over the brachial artery on the inside of the arm.



# HOW TO APPLY THE ARM CUFF

5. Pull the cuff so that the top and bottom edges are tightened evenly around your arm.
6. When the cuff is positioned correctly, press the sewn hook material **FIRMLY** against the pile side of the cuff.
7. Make certain the cuff fits snugly around your arm. The cuff should make good contact with your skin.
8. Sit in a chair with your feet flat on the floor and place your arm on a table so that the cuff is at the same level as your heart.
9. Relax your arm and turn your palm upward.
10. Be sure there are no kinks in the air tubing.



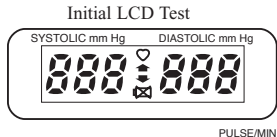


# HOW TO TAKE A READING

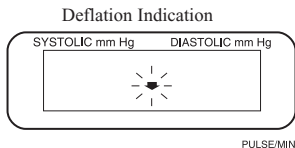
Please read “How To Apply The Arm Cuff” before taking a reading.

1. Press the On/Off button.

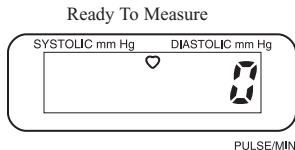
- a) All display symbols appear for about one second. This is the initial LCD Test.



- b) The display symbols disappear and the Deflation Indication Symbol (▼) starts to flash.



- c) When the monitor completes the necessary preparations before measurement, the Ready To Measure Symbol (♥) appears next to a zero.

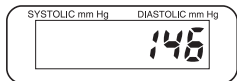


**NOTE:** Wait for the Ready To Measure Symbol (♥) before taking a measurement.

2. Begin inflating the cuff by rapidly squeezing the inflation bulb until you have reached approximately 40 mmHg higher than your normal systolic reading. If your normal systolic blood pressure is unknown, inflate the cuff to 180 mmHg.

# HOW TO TAKE A READING

3. Stop pumping the inflation bulb when you have reached your correct inflation level and remain still. The cuff will begin to deflate automatically.



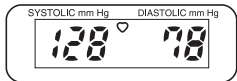
Indicated Value  
Drops



PULSE/MIN

Measuring

4. As the cuff deflates, decreasing numbers appear on the display. The Ready To Measure Symbol (♥) flashes at the onset of oscillation signals.

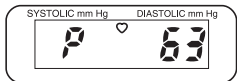


Blood Pressure  
Reading Display  
(for approx.  
3.5 sec.)



Pulse Reading Display  
(for approx. 2 sec.)

5. When measurement is complete, the Ready To Measure Symbol (♥) stops flashing and your blood pressure and pulse display alternately.



6. When the Deflation Indication Symbol (▼) appears on the display, push the air release button to release any air left in the cuff.

**NOTE:** Wait 5-10 minutes before taking another blood pressure measurement. Waiting allows the engorged blood vessels to return to normal. You may require more rest time between readings depending on your individual physical characteristics.

**REMEMBER TO KEEP A RECORD OF YOUR BLOOD PRESSURE AND PULSE MEASUREMENTS.**






# CARE AND MAINTENANCE

**To protect your monitor from damage, please do the following:**

- Do not subject your monitor to extreme temperatures, humidity, and direct sunlight.
- Do not fold the cuff and tubing tightly.
- Do not inflate the monitor over 280 mmHg.
- Do not disassemble the monitor.
- Do not subject the monitor to strong shocks (for example, dropping the monitor on the floor).
- Do not clean the monitor with volatile liquids.

**THE MONITOR SHOULD BE CLEANED WITH A SOFT, DRY CLOTH.**

# ERROR INDICATORS

Error Symbol	Cause	Correction
	Cuff under-inflated.	Wait 10 minutes before taking another measurement. Repeat steps listed under “How To Tke a Reading”, but manually inflate the cuff 40 mmHg higher than the previous inflation value.
	Movement during measurement. No pulse or blood pressure reading due to very weak artery pulse.	
	Residual air pressure in cuff.	Carefully read and repeat steps linsted under “How to Take a Reading.”
	Cuff over-inflated (more than 300 mmHg.)	
	Batteries have run down.	Replace all 4 four “AAA” batteries.

If you continue to have difficulty obtaining a reading, call **OMRON HEALTHCARE CUSTOMER SERVICE TOLL FREE 1-800-634-4350**. Please tell the representative you have a Omron Model HEM-412C Manual Inflation Blood Pressure Monitor.

# CAUTION INDICATORS

**NOTE:****POTENTIAL FOR RADIO/TELEVISION INTERFERENCE (for U.S.A. only)**

This product has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. The product generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If the product does cause harmful interference to radio or television reception, which can be determined by turning the product on and off, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the product and receiver.
- Connect the product into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

**POTENTIAL FOR RADIO/TELEVISION INTERFERENCE (for Canada only)**

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the interference-causing equipment standard entitled "Digital Apparatus", ICES-003 of the Canadian Department of Communications.

LICENSED UNDER U.S. PAT.

4829419, 4942516, 4896260, 4531182, 4825364, 4686622, 4121284,  
4396976, 4371923, 4471385, 4120583, 4435732, 4672457, 4739396

# SPECIFICATIONS

Model:	<b>HEM-412C</b>
Display:	LCD digital display
Measurement Range:	Pressure: 0-280 mmHg Pulse: 40-200/min.
Accuracy/Calibration:	Pressure: $\pm 3$ mmHg or 2% of reading Pulse: $\pm 5\%$ of reading
Inflation:	Manual by inflation bulb
Deflation:	Automatic pressure release valve
Rapid Air Release:	Push button valve
Pressure Detection:	Capacitive pressure sensor
Measurement Method:	Oscillometric method
Pulse Wave Detection:	Capacitive pressure sensor
Power Source:	4 "AA" batteries (not included)
Battery Life:	Approximately 1 year when used once a day for 2 minutes
Operating Temperature/ Humidity:	50°F to 104°F (10°C to 40°C) 30 to 85% RH maximum
Storage Temperature/ Humidity:	-4°F to 140°F (-20°C to 60°C) 10 to 95% RH maximum
Console Weight:	Approximately 8 oz (225g) with batteries
Outer Dimensions:	Approximately 4 7/8" (w) x 2 1/5" (l) x 3 1/6" (h) (124mm x 56mm x 80mm)
Cuff Dimensions:	Approximately 5 1/2" (w) x 18 7/8" (l) (140mm x 480mm)
Arm Circumference Range	9" to 13"
UPC Code:	0 73796 04122 9

**NOTE:** These specifications are subject to change without notice.

# LIMITED ONE YEAR WARRANTY

Your HEM-412C Manual Inflation Blood Pressure Monitor is warranted to be free from manufacturing defects for a period of one year under normal use. This warranty extends only to the original retail purchaser.

Should repair be needed within the warranty period, ship the unit prepaid to **Omron Healthcare, Inc., 300 Lakeview Parkway, Vernon Hills, IL 60061, Attn: Service Dept.**, together with \$5.00 for return shipping and insurance. Be sure to include the model number of your unit and your phone number on any correspondence.

We will either repair or replace (at our option) free of charge any parts necessary to correct defects in the materials or workmanship.

The above warranty is complete and exclusive. The warrantor expressly disclaims liability for incidental, special, or consequential damages of any nature. (Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above warranty may not apply to you.)

Any implied warranties arising by the operation of law shall be limited in duration to the term of this warranty. (Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.)

This warranty gives you specific legal rights and you may have other rights which vary from state to state. As a condition to operation of your warranty, the enclosed registration card must be completed and sent to us within 10 days from the date of purchase.

FOR CUSTOMER SERVICE CALL TOLL FREE:  
1-800-634-4350

**For Customer Service  
Call Toll Free  
1-800-634-4350**

Manufactured for:

**OMRON HEALTHCARE, INC.**

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